I have been told many times that fire is good for the redwood and that it actually stimulates their growth! Another fallacy. Fire never helped any forest permanently. Fires have run through the redwoods for centuries. On the 30 acre tract which we studied last year, we dated some fires back to the year 843, nearly 1100 years ago, and the scars as revealed on the stumps show there were dozens of additional fires since then, possibly two or three bad ones each century. Were it not for the fires of the past, the average tree would certainly be larger, and there would be probably 15% more timber—in fact you can say that fires of the past plus the ensuing heart rot have caused just that much loss to the lumberman. It is a peculiarity of redwood that it has no tree-killing insect or fungus enemies of any consequence, but fire is a real enemy. Just because a fire sweeping through a virgin forest does not lay low the entire stand, is not proof that great damage has not been done. On the 30 acre area which I have already described, we had a fire after we started our work, and although it did not burn through the entire 30 acres, it brought down 8 large trees. Fire, also, is the direct cause of most of the rather prevalent heart rot which causes so much loss of good lumber, to say nothing of the large holes burned into the butts of the trees, known locally as "goosepens". I hope I have impressed you with the fact that fire is a genuine enemy of the redwood forest and should therefore be kept out.

THE SANTA BARBARA MUSEUM OF NATURAL HISTORY

Ralph Hoffman

The Santa Barbara Museum of Natural History is an outgrowth of The Museum of Comparative Oology, which was founded in 1916 by W. Leon Dawson. In 1922, Mr. Dawson resigned as director, and, early in 1923, the Museum broadened its scope and began to exhibit birds, mammals, insects and flowers. In 1924, a department of archaeology was added. The trustees and the director of the Santa Barbara Museum have chosen to confine its exhibits and collections almost wholly to the local field, believing that a restricted field would give the Museum a wide enough scope and make it of the greatest value to the community. Before the Museum had any definite space for botanical exhibits, it put on each spring a wild flower exhibit in the patio. In 1927, Mrs. Clinton B. Hale gave a wing for botany and made provision for continuous shows of both native and exotic flowers. The wing was given in memory of Mr. Clinton B. Hale, who was particularly interested in growing rare trees and shrubs in Santa Barbara. The director began, in 1927, the collection of material for herbaria both of native and exotic plants. At the close of 1928, these herbaria included over 5000 sheets of native plants and over 3000 sheets of exotics.

[1] The introduction work of this pioneer plantsman is well described by Wilson Popenoe (Jour. Hered. 13:215) under the name of Dr. E. O. Fenzi, but with a reference to the name Franceschi. By this name the Doctor was universally known in California and under it was issued his catalogs of exotic plants.—W. L. J.

Santa Barbara has long had an especial interest in exotic flora. From the days of Ellwood Cooper and Joseph Sexton to the time of Dr. Franceschi,[1] it has been a favorite place for the introduction of new species from all parts of the world. There are now in the old Ellwood Cooper place, in the grounds of Mrs. M. M. Yates, in what was formerly the Kinton Stevens place, in Dr. Franceschi's former home, Montarioso, in the Gillespie and Hale places, on the grounds of Mrs. Thomas Bard at Hueneme and in Alameda Park, planted by Dr. A. B. Doremus, some of the finest specimens of rare trees and shrubs in California. Because of California's favorable climate, many species grow here in the open which are not hardy in the older centres of horticulture in the east. Such trees as the famous Lemon-scented Eucalyptus at Ellwood, the Cork Oak on West Montecito Street, and the Cape Chestnut in the Hale Place, are probably the finest specimens of their respective species in the United States. The herbarium of exotics, when completed, will be the basis for a check list of the exotics grown in Santa Barbara and a guide to the fine specimens of rare species.

Since the days of Nuttall and Greene, very little systematic collecting of native plants has been carried on in the Santa Barbara region. The mountains to the north have never been thoroughly explored. No one knows where the desert flora, which pushes past Mt. Pinos into the upper Cuyama Valley, merges into the transition zone. Even in the short time that has elapsed since the berbarium was started, a number of interesting finds have been made. The type locality of Cheilanthes cooperae has been rediscovered. The remnants of a northern flora, as exemplified by such species as Vaccinium ovatum, Osmaronia cerasiformis and Lithocarpus densiflora have been discovered in several localities. Comarostaphylos diversifolia is now known to occur at scattered points on the mainland. A flourishing stand of Adenostoma sparsiflora has been re-discovered (Baker collected a specimen but did not, so far as the writer knows, publish the occurrence).

The Museum has a Botanic Garden of fifteen acres which has been planted to trees, shrubs and herbs of the Pacific Coast. The ground has lent itself to the segregation of these in eight associational groups, those of the Redwood belt, those of the grass-land, those of the Santa Barbara Islands, those of the desert and so on. The site of this Botanic Garden is remarkable for its beauty and for its historic interest. It has a view of the mountains to the north and of the sea and the Santa Barbara Islands to the south, and contains the well preserved remnants of the dam built by the Indians in 1779 to furnish water for the Santa Barbara Mission.

The nucleus of the Museum building was built, in 1923, by Mrs. R. G. Hazard, on land given by Miss Caroline Hazard. It was a cousin of Mr. R. G. Hazard and Miss Hazard, namely Mr. Barclay Hazard, who helped Dr. Greene in 1886 to make his pioneer exploration of the Channel Islands. This service to botany is commemorated by the name Hazardia, given by Greene to a new genus which he separated from Aplopappus.